

F R E E D O M



TECHNOLOGIES
INCORPORATED

ORIGINAL

February 28, 2007

FILED/ACCEPTED

FEB 28 2007

Federal Communications Commission
Office of the Secretary

Ex Parte Presentation

Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, SW
Washington, DC 20554

ORIGINAL

Re: *Amendment of the Commission's Part 90 Rules
in the 904-909.75 and 919.75-928 MHz Bands,
WT Docket No. 06-49*

Dear Ms. Dortch:

On February 27, 2007, Carson Agnew, Mark McDowell, Michael McMains, Janice Obuchowski and Ron Olexa all representing Progeny LMS, LLC ("Progeny"), and Dr. Raj Singh of Telecom Ventures met with Paul D'Ari, Robert Krinsky, Paul Murray, Blaise Scento and Weiren Wang of the Wireless Telecommunications Bureau and Julius Knapp, Karen Rackley, Bruce Romano, Alan Stillwell and Hugh Van Tuyl of the Office of Engineering and Technology to discuss Progeny's position in the above-captioned proceeding, as previously expressed in comments and reply comments.

We discussed potential LMS interference to and from cordless phones operating in the 900 MHz band. As detailed in a handout, a copy of which is attached, we noted that limits on LMS power spectral density - as described in Progeny's NPRM response - are sufficient to prevent interference in real-world situations.

ADVANCED IDEAS
IN COMMUNICATIONS

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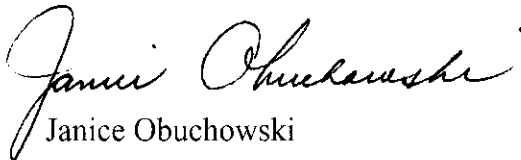
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In accordance with Section 1.1206(b) of the Commission's Rules, please accept the original and one copy of this filing and the attached handout for submission. Should you have any questions or concerns in connection with this submission, please contact me at (202) 371-2800.

Sincerely,

A handwritten signature in cursive script, appearing to read "Janice Obuchowski".

Janice Obuchowski

Attachment

cc: Paul D'Ari
Julius Knapp
Robert Krinsky
Paul Murray
Karen Rackley
Bruce Romano
Blaise Scento
Alan Stillwell
Hugh Van Tuyl
Weiren Wang

Analysis of LMS Interference To and From Cordless Telephones

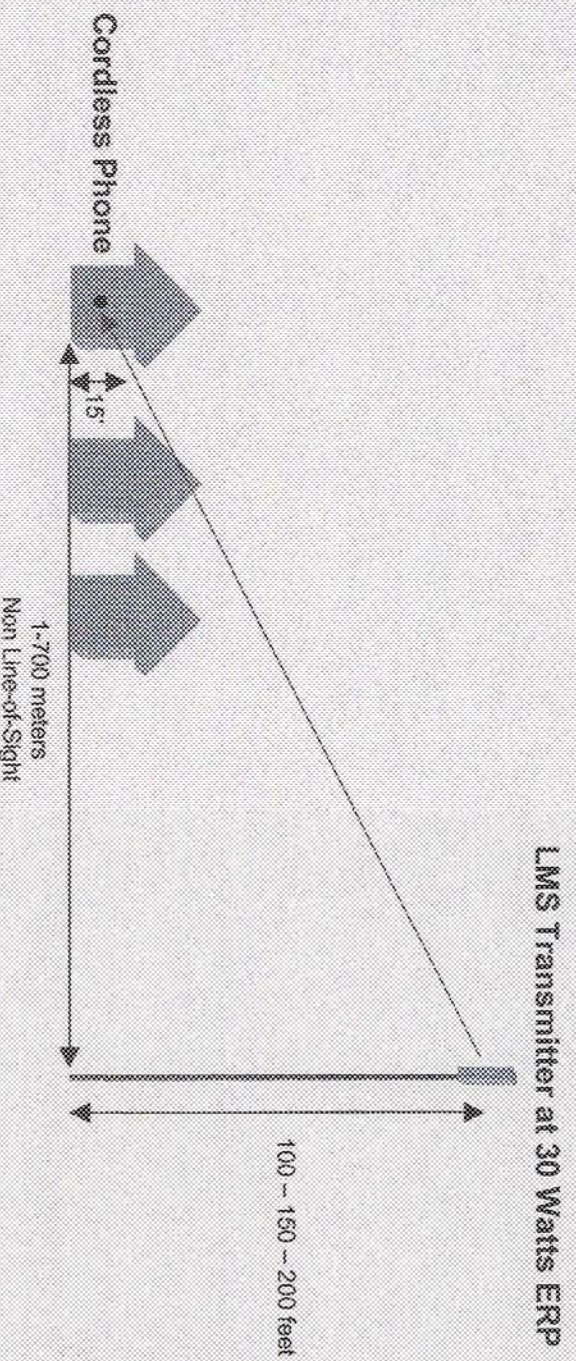
WT Docket No. 06-49

Progeny LMS, LLC
February 27, 2007

Overview

- Limits on LMS power spectral density – as described in Progeny's NPRM response – are sufficient to prevent interference in real-world situations
- 900 MHz cordless phone operating power
 - In normal operation, cordless phones do not transmit above 250 milliwatts (24 dBm)
 - Progeny's technical analysis shows that with worst case LMS interference, a cordless phone would not be required to operate above 0.63 milliwatts (-2 dBm)
- Interference calculation
 - LMS signal propagation can be modeled using the COST-Walfisch-Ikagami propagation model with suburban parameters
 - Building penetration loss of 8 dB
- Power spectral density
 - Cordless phones are normally FHSS devices which have individual hop carriers of 50 kHz. (500 kHz is the maximum permitted under Part 15.247)
 - The LMS system contemplated by Progeny typically spreads its energy over a 5 MHz bandwidth
 - A device operating on a 5 MHz channel has a power spectral density 20 dB less than a device operated on a 50 kHz channel

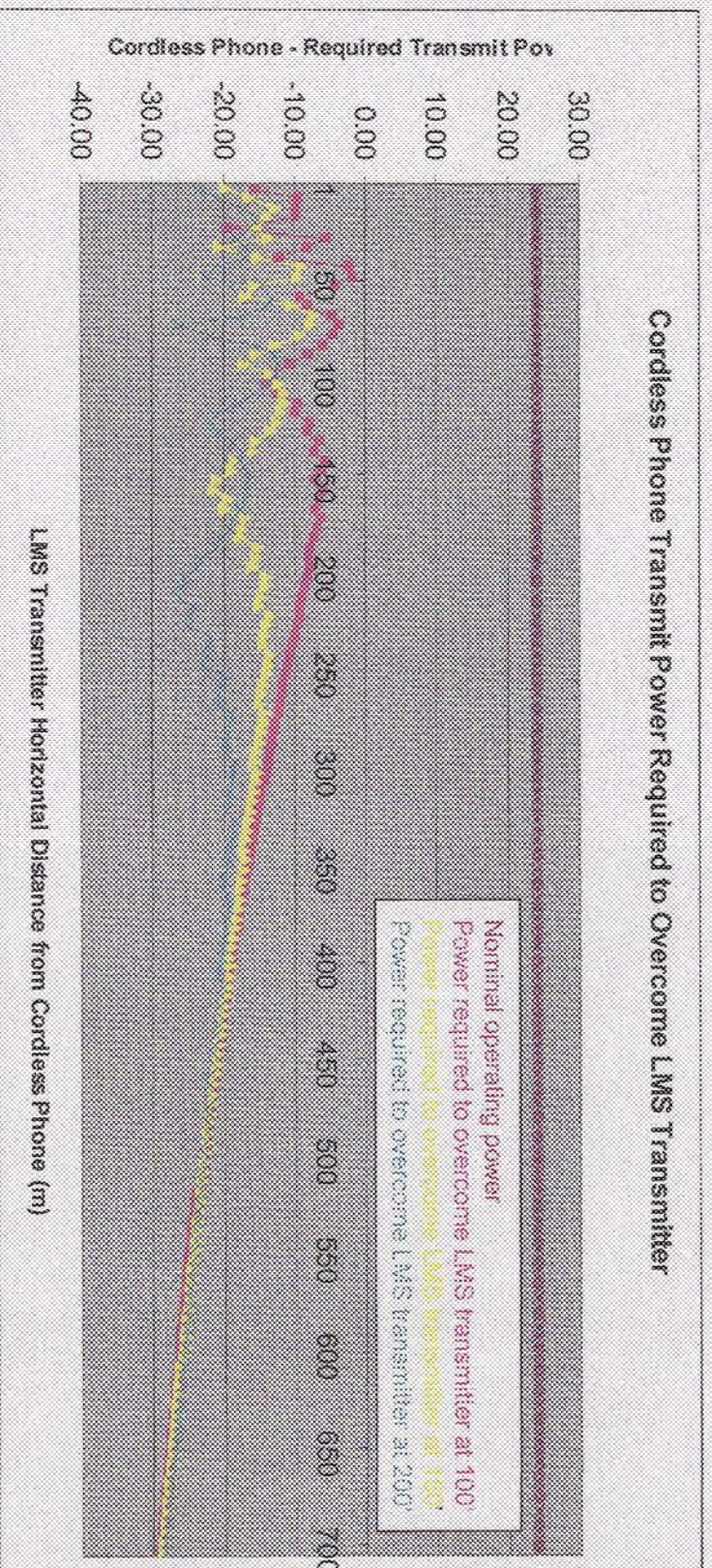
Analysis



- LMS transmitter at three different heights – 100, 150, 200 feet
- LMS transmitter 1-700 meters from the cordless phone

At what LMS height and distance would an LMS transmitter cause a cordless phone to be unable to generate sufficient power to overcome the LMS interference?

Results



With the worst case LMS interference, a cordless phone would not be required to operate above 0.63 milliwatts → 26 dB below its nominal operating power